

*Amendments to the Claims*

The listing of claims will replace all prior versions, and listings of claims in the application.

1-20. (Cancelled)

21. (Currently Amended) A system for producing a pulse code modulation (PCM) signal, comprising:

a first filter configured to produce an [[input]] in-phase signal  $I(n)$  from a secondary audio program (SAP) signal;

a second filter ~~that generates~~ configured to produce a quadrature-phase signal  $Q(n)$  from the [[input]] in-phase signal  $I(n)$ ;

a FM demodulator configured to ~~generate~~ produce a FM demodulated signal substantially equal to  $Z(n)/X(n)$ , wherein  $Z(n)$  and  $X(n)$  are functions of  $I(n)$  and  $Q(n)$ , the FM demodulator including a denominator device that estimates a value  $1/X(n)$  based at least in part on a prior estimated value of  $1/X(n)$  and a transition speed of  $X(n)$ ; and

a third filter configured to produce the PCM signal from the FM demodulated signal ~~substantially equal to  $Z(n)/X(n)$~~ .

22. (Previously Presented) The system of claim 21, wherein  $Z(n)$  is substantially equal to  $[I(n)Q'(n) - I'(n)Q(n)]$  and  $X(n)$  is substantially equal to  $[I^2(n) + Q^2(n)]$ .

23. (Original) The system of claim 21, wherein the SAP signal is a constant magnitude signal, a sine wave, or a cosine wave.

24. (Original) The system of claim 21, wherein the first filter is a band pass filter.

25. (Original) The system of claim 21, wherein the second filter is a Hilbert filter.

26-31. (Cancelled)

32. (Previously Presented) The system of claim 21, wherein the denominator device estimates the value  $1/X(n)$  based at least in part on the prior estimated value of  $1/X(n)$  plus an error value.

33. (Previously Presented) The system of claim 32, wherein the error value is substantially equal to  $[1-X(n)/X(n-1)]$ .

34. (Currently Amended) The system of claim 33, wherein the error value is scaled by a value of a scaling coefficient before being added to the prior estimated value of  $1/X(n)$ .

35. (New) The system of claim 34, wherein the value of the scaling coefficient is based on the transition speed of  $X(n)$ .